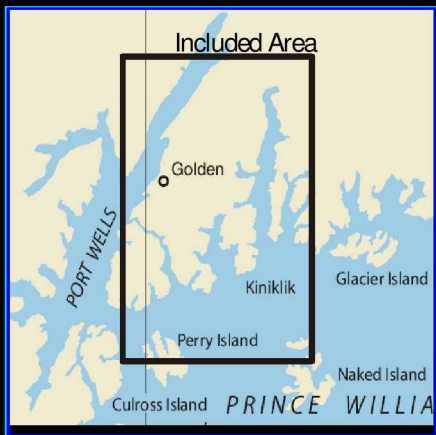


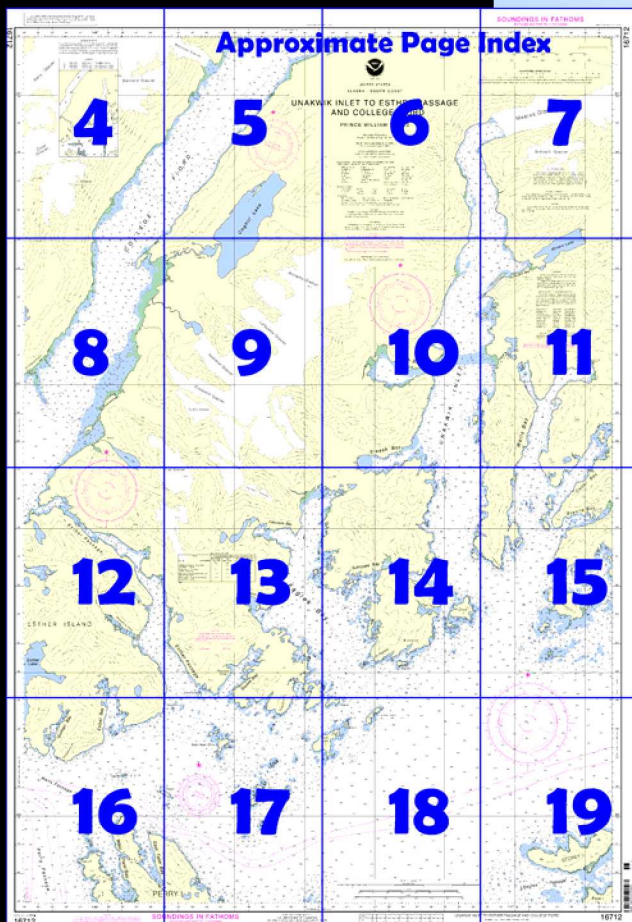
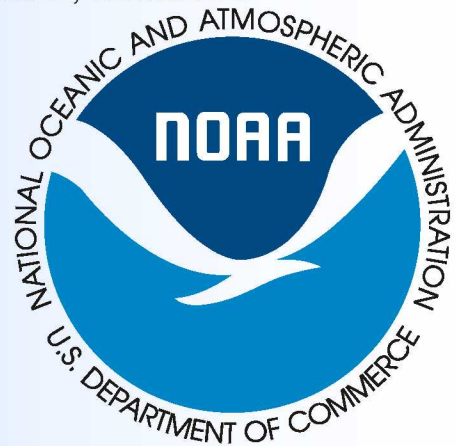
BookletChartTM

Unakwik Inlet to Esther Passage and College Fiord (NOAA Chart 16712)



A reduced scale NOAA nautical chart for small boaters. When possible, use the full size NOAA chart for navigation.

- ✓ Complete, reduced scale nautical chart
- ✓ Print at home for free
- ✓ Convenient size
- ✓ Up to date with all Notices to Mariners
- ✓ United States Coast Pilot excerpts
- ✓ Compiled by NOAA, the nation's chartmaker.



Home Edition (not for sale)



What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

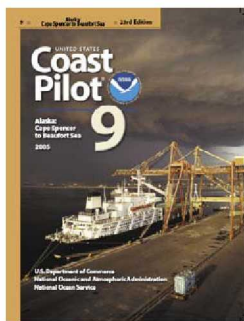
This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.



[Coast Pilot 9, Chapter 4 excerpts]

(503) South Bay is on the E side of Perry Island Light. Good anchorage is available for moderate-size vessels in 10 to 24 fathoms, sand and mud bottom, in the cove at the head of the bay. When entering, avoid the rocks that extend almost 0.2 mile from the E side of the entrance to the cove. An oyster farm is near the head of the cove.

(504) East Twin Bay has anchorage for small craft near the center of the bay, about 0.8 mile from the head in 13 fathoms with a soft

bottom. A midchannel course should be followed until a prominent rock about 20 feet high, near the center of the bay, bears S approximately 0.2 mile. The portion of the bay beyond the rock is navigable in spots, but should be avoided because the area is foul.

(505) West Twin Bay is entered mid-channel, avoiding the chain of islands and foul ground extending for over a mile from the point of land

on the W side on the entrance. Small craft entering should favor the NE side until past the narrow area about 1 mile from the head of the bay, and then favor the SW side, passing W of a rock about 15 feet high, near the middle of the bay 0.8 mile from the head. A 1½-fathom shoal exists just N of the narrow section approximately 0.1 mile from the point of land protruding NE from the W shore.

(507) Anchorage is available in the bay for mid-sized vessels in 5 to 15 fathoms of water, mud bottom, in a bight about 0.7 mile S of the W point and about 0.1 mile N of the gravel spit extending from the E shore, and E of the rock in the middle of the bay. The area S of the gravel spit is shallow and rocky.

(508) Perry Passage is between Perry Island and Culross Island, 2.5 miles to the W. Wells Passage, between Perry and Culross Islands on the S and Esther Island on the N, is over 2 miles wide. The two passages have depths of 100 to 250 fathoms. Caution should be exercised when approaching or departing the E end of Wells Passage. Numerous islands, islets, rocks, and shoals extend E and SE for about 5 to 9 miles.

(509) Esther Island is mountainous, wooded to a height of about 1,000 feet, and the summits are bare rocks. The peak on the SE point of Esther Island, and the sharp twin peaks on the SW point, are prominent. Point Esther Light (60°47'08"N., 148°06'01"W.), 31 feet (9.5 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the SW side of the island. Three bays are between the light and Esther Passage. Esther Bay, the easternmost is 3.5 miles E of the light on Point Esther and extends N about 2 miles. The entrance, 0.7 mile wide, is partly blocked by several wooded islets, bare rocks, and rocks awash. The interior of the bay is dotted with islets and rocks.

(510) Quillian Bay, the middle bay, 1.3 miles E of the light, extends 1.7 miles NNE, and is about 0.2 mile wide. The entrance is constricted to a width of 0.1 mile. An islet is 0.7 mile above the entrance and two rocks awash are toward the head of the bay. The shores are steep-to.

(511) When transiting the bay from S, vessels are advised to stay midchannel between the easternmost islet and the E shore. Continuing N from the islets, the bay widens to 0.4 mile, average depth 12 fathoms. A foul area extends approximately 0.1 mile off the E shore at the widest part of the bay. About 0.45 mile N of the islets, the bay narrows to 0.1 mile with numerous rocks extending W from the E shore. Vessels should stay within 50 yards of the W shore until the bay starts widening again. Continuing N to the head of the bay, vessels should favor for the W shore. Average depth in the area is 3½ to 5½ fathoms. The entrance to the lagoon NW of the head of the bay is blocked by a rock.

(512) Lake Bay is 0.7 mile E of the light, extends 1.2 miles NW, and is about 0.2 mile wide. Fishing craft find indifferent anchorage near the E shore SE of the narrowest part where the bay widens to its maximum of 0.3 mile. Rocks awash extend about 110 yards SE of the point forming the NW extremity of the anchorage bight. A submerged rock is 0.3 mile from the head of the bay. In general, the shores are steep-to and depths are too great for convenient anchorage. About 0.5 mile from the head on the E side is a freshwater stream that discharges from Esther Lake. A fish hatchery and fish pens are near the stream.

(513) Esther Passage separates Esther Island from the mainland. The S entrance, 7.5 miles E of Point Esther and 1.8 miles NW of Bald Head Chris Island, is about 1.5 miles wide. The entrance is flanked by two wood islets. A rock awash at about half tide is about 0.3 mile E of the W islet. The bottom of the entrance is extremely irregular, varying from 3¾ to 60 fathoms. Once inside, the water deepens rapidly to more than 130 fathoms for 2 miles or more. The passage trends NW for about 10 miles and connects with Port Wells about 8.5 miles N of Point Esther and 3.5 miles S of Golden; it is sharply constricted at its midpoint. The least depth in the constricted channel is 3½ fathoms at 60°53'39.6"N., 147°56'59.7"W. The S half is about 0.7 mile wide and the N half, 400 to 250 yards wide. The passage is clear except for the 3½ fathom area previously mentioned and a dangerous submerged rock 200 yards NE

from the S shore near the bend 1 mile E of the W entrance to Esther Passage. The best way to avoid the submerged rock is to hold well into the N half of the channel when swinging on the turn.

Table of Selected Chart Notes

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Is isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	
(2) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.			
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.			

TIDAL INFORMATION

Place Name (LAT/LONG)	Height referred to datum of soundings (MLLW)			
	Mean Higher High Water feet	Mean High Water feet	Mean Low Water feet	Extreme Low Water feet
Gibbon Anchorage, Green Island (60°16'N/147°26'W)	11.5	13.5	1.3	-4.0
Snug Harbor, Cook Inlet (60°6'N/152°34'W)	15.7	14.9	1.7	-4.0
Port Audrey, Knight Island, Drier Bay (60°20'N/147°46'W)	12.1	11.2	1.6	-4.0
Eshamy Bay, Knight Island Passage (60°26'N/147°58'W)	12.1	11.2	1.5	-4.0

(699)

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Rugged I, AK	WNG-526	162.425 MHz
Naked I, AK	WNG-530	162.500 MHz
Point Pigot, AK	KZZ-93	162.450 MHz
Cape Hinchinbrook	WNG-532	162.525 MHz
Potato Point, AK	WNG-527	162.425 MHz
Wasilla, AK	KZZ-98	162.400 MHz
Valdez, AK	WXJ-63	162.55 MHz
Cordova, AK	WXJ-79	162.40 MHz
Whittier, AK	KXI-29	162.40 MHz

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.

During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

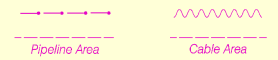
AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

CAUTION

SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:



Mercator Projection
Scale 1:50,000 at Lat. 60° 50'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FATHOMS
(FATHOMS AND FEET TO ELEVEN FATHOMS)
AT MEAN LOWER LOW WATER

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 1.883° southward and 7.446° westward to agree with this chart.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska, or at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.

Refer to charted regulation section numbers.

HEIGHTS

Heights of rocks, bridges, landmarks and lights are in feet and refer to Mean High Water. Contour and Summit elevation values are in feet and refer to Mean Sea Level.

SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the U. S. Coast Guard, Geological Survey, and National Imagery and Mapping Agency.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 9 for important supplemental information.

COLREGS, 80.1705 (see note A)

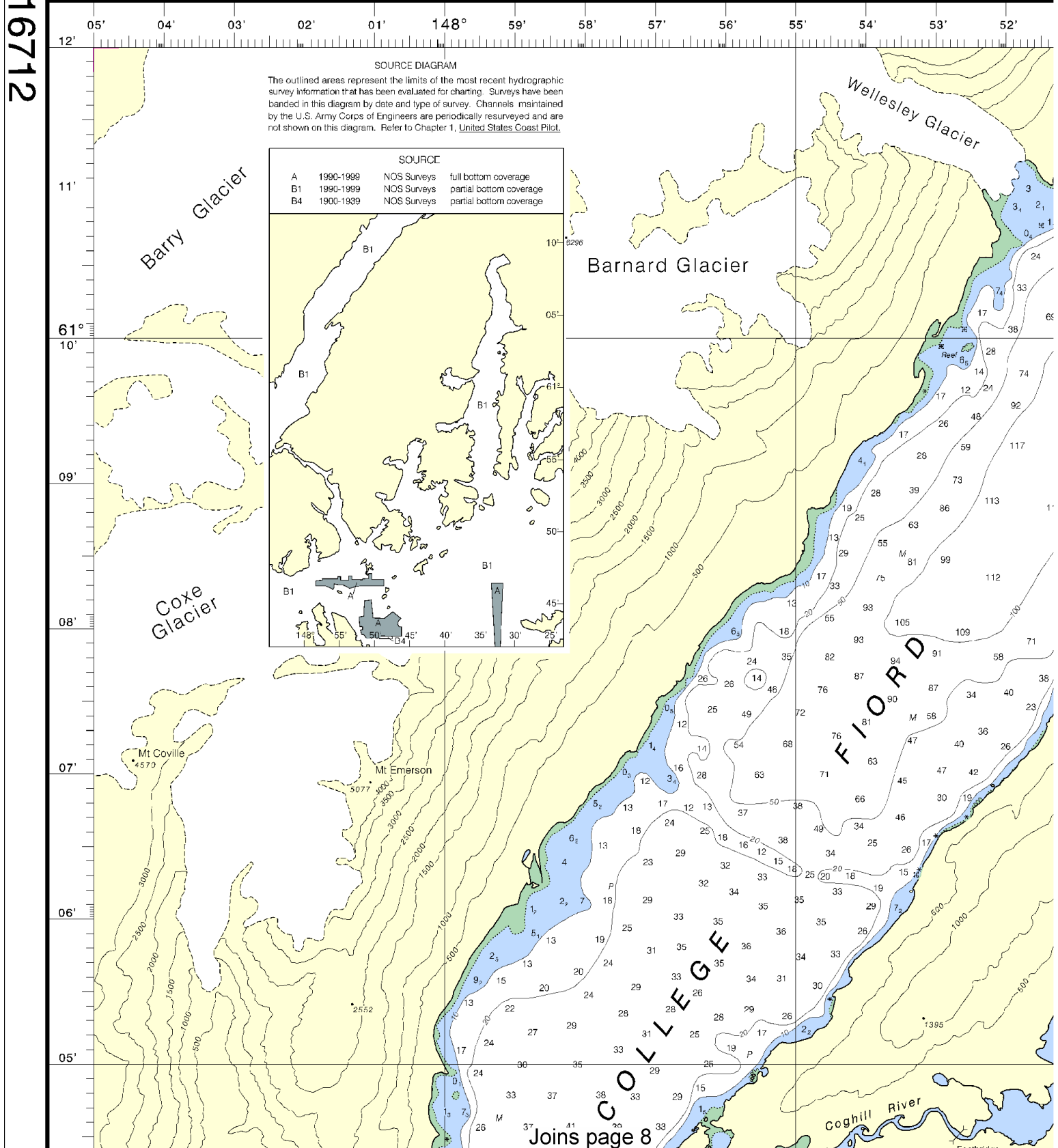
International Regulations for Preventing Collisions at Sea, 1972.
The entire area of this chart falls seaward of the COLREGS Demarcation Line.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3292.

16712



4

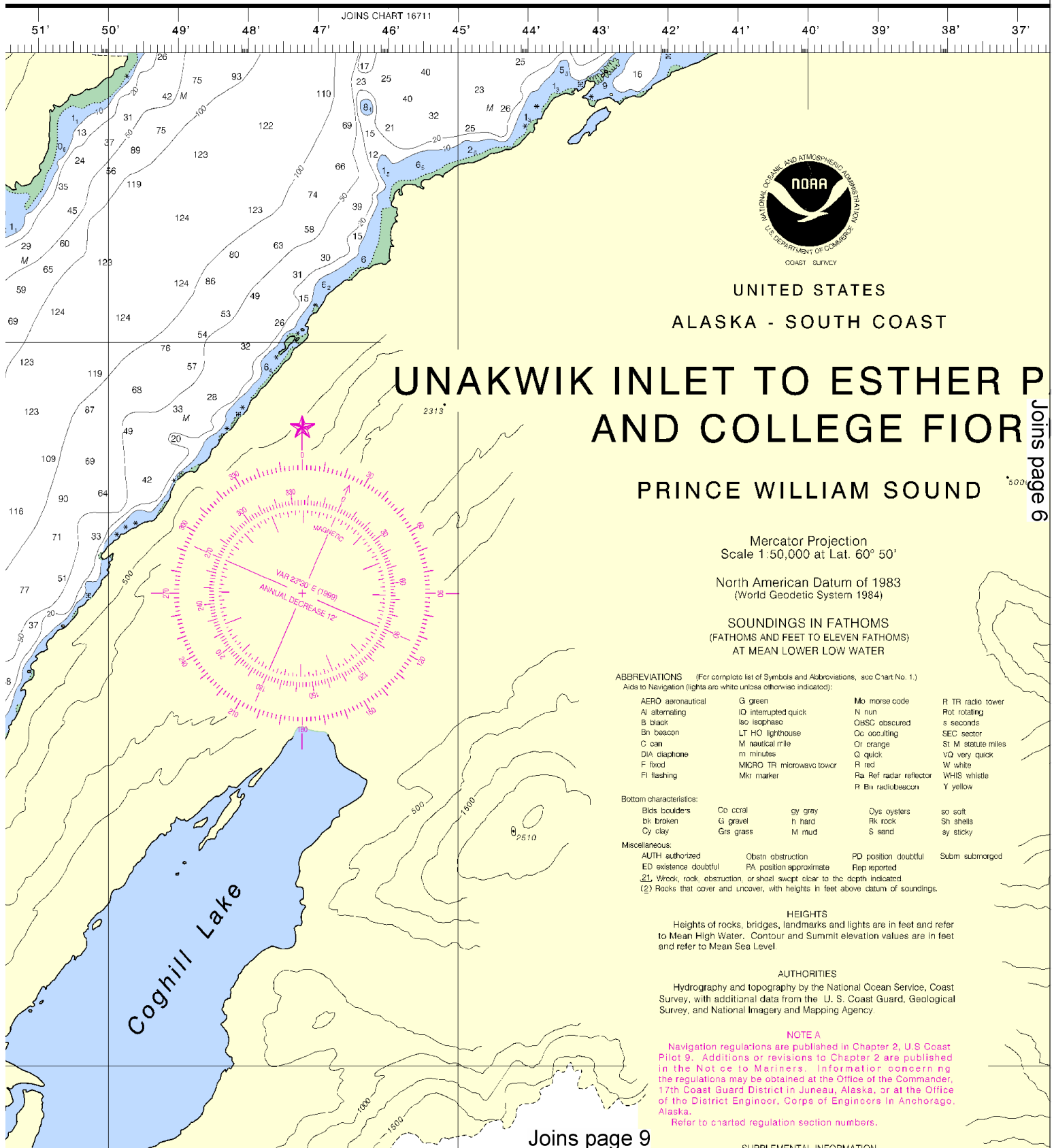


Printed at reduced scale.

SCALE 1:50,000
Nautical Miles

See Note on page 5.



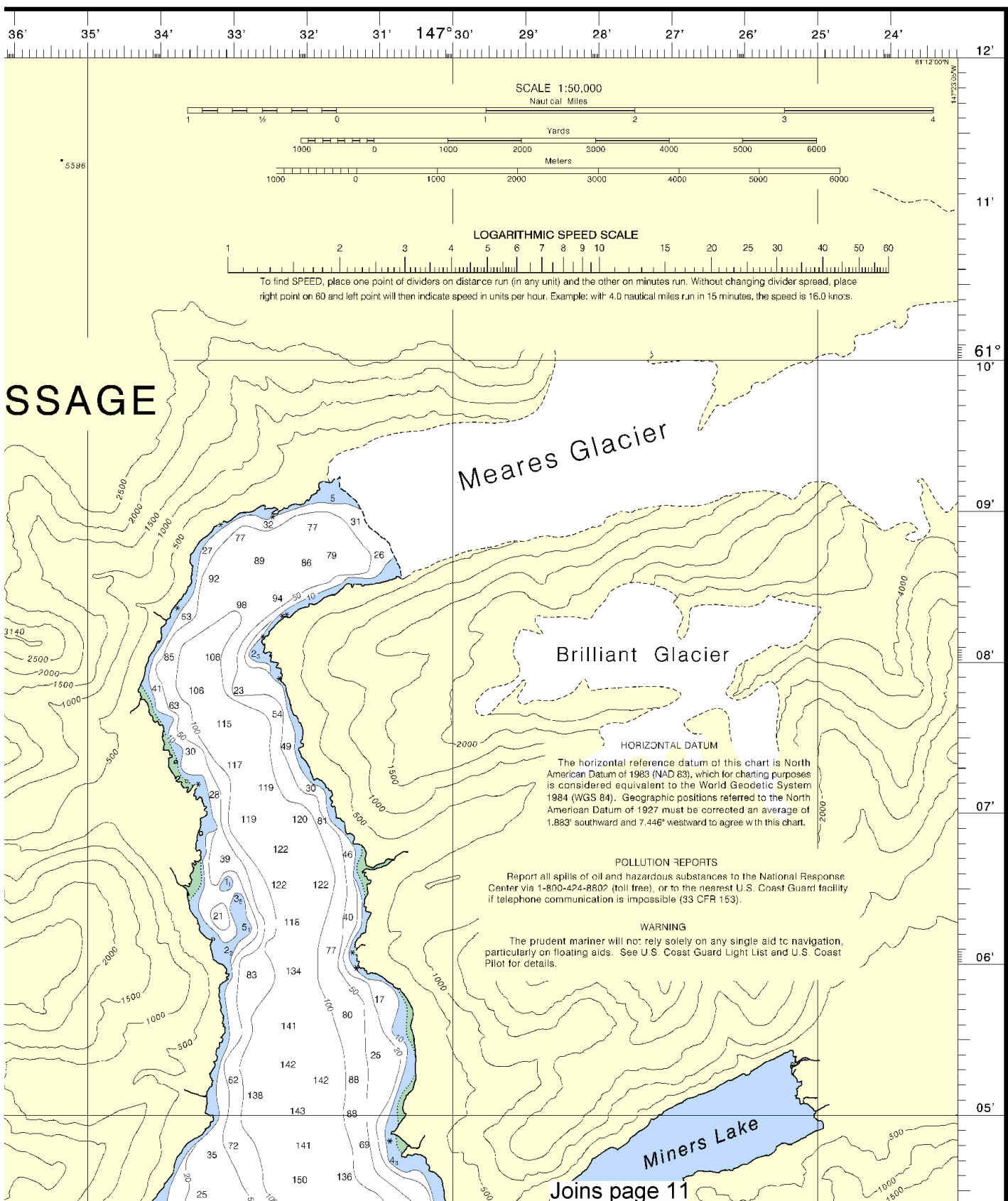


This BookletChart was reduced to 75% of the original chart scale.
The new scale is 1:66667. Barscales have also been reduced and
are accurate when used to measure distances in this BookletChart.

SOUNDINGS IN FATHOMS

(FATHOMS AND FEET TO 11 FATHOMS)

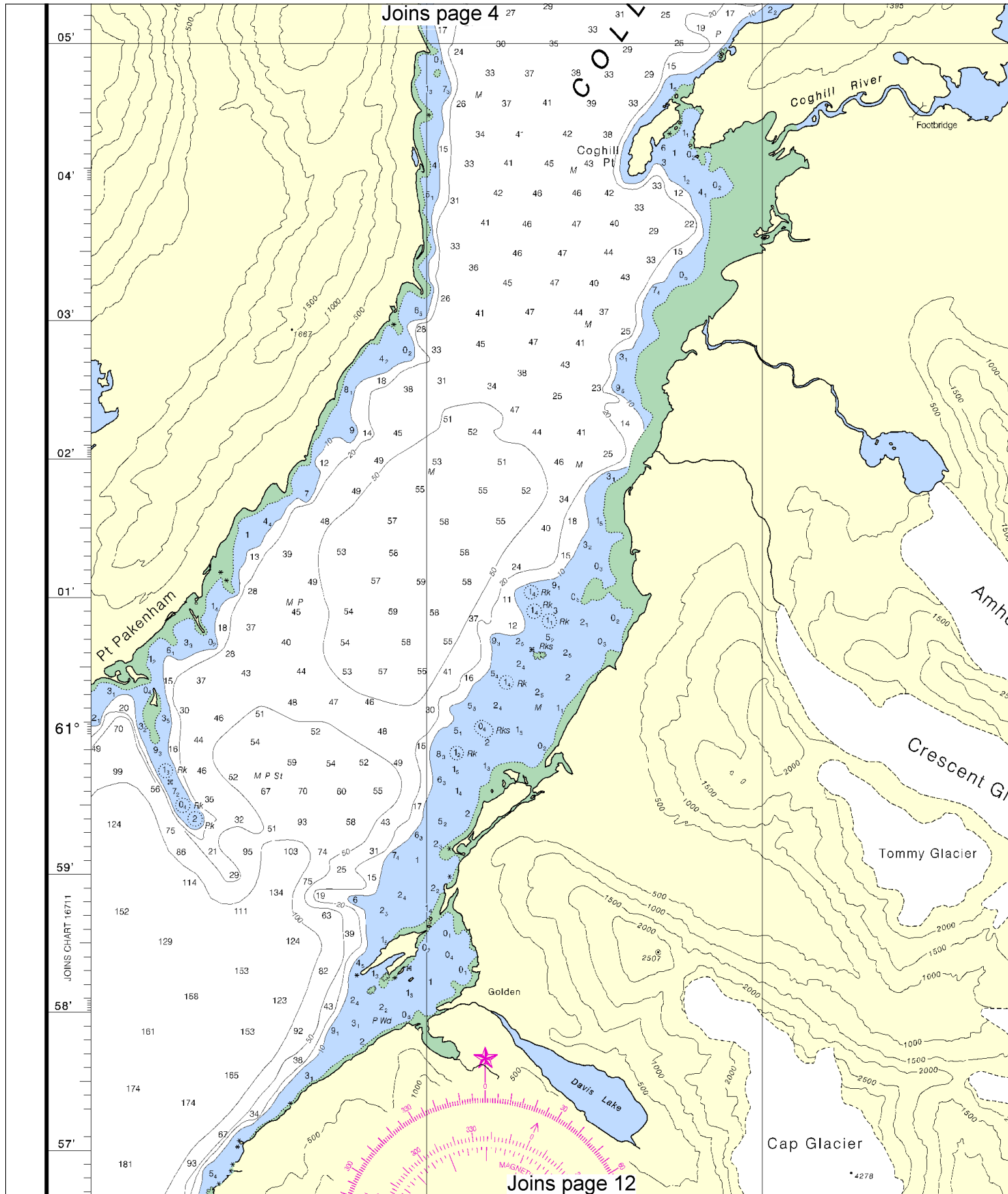
Nautical Chart Catalog No. 3, Panel L



16712

This BookletChart has been updated with: Coast Guard Local Notice To Mariners: 0710 2/16/2010,
 NGA Weekly Notice to Mariners: 0910 2/27/2010,
 Canadian Coast Guard Notice to Mariners: 0909 9/25/2009.





Joins page 5

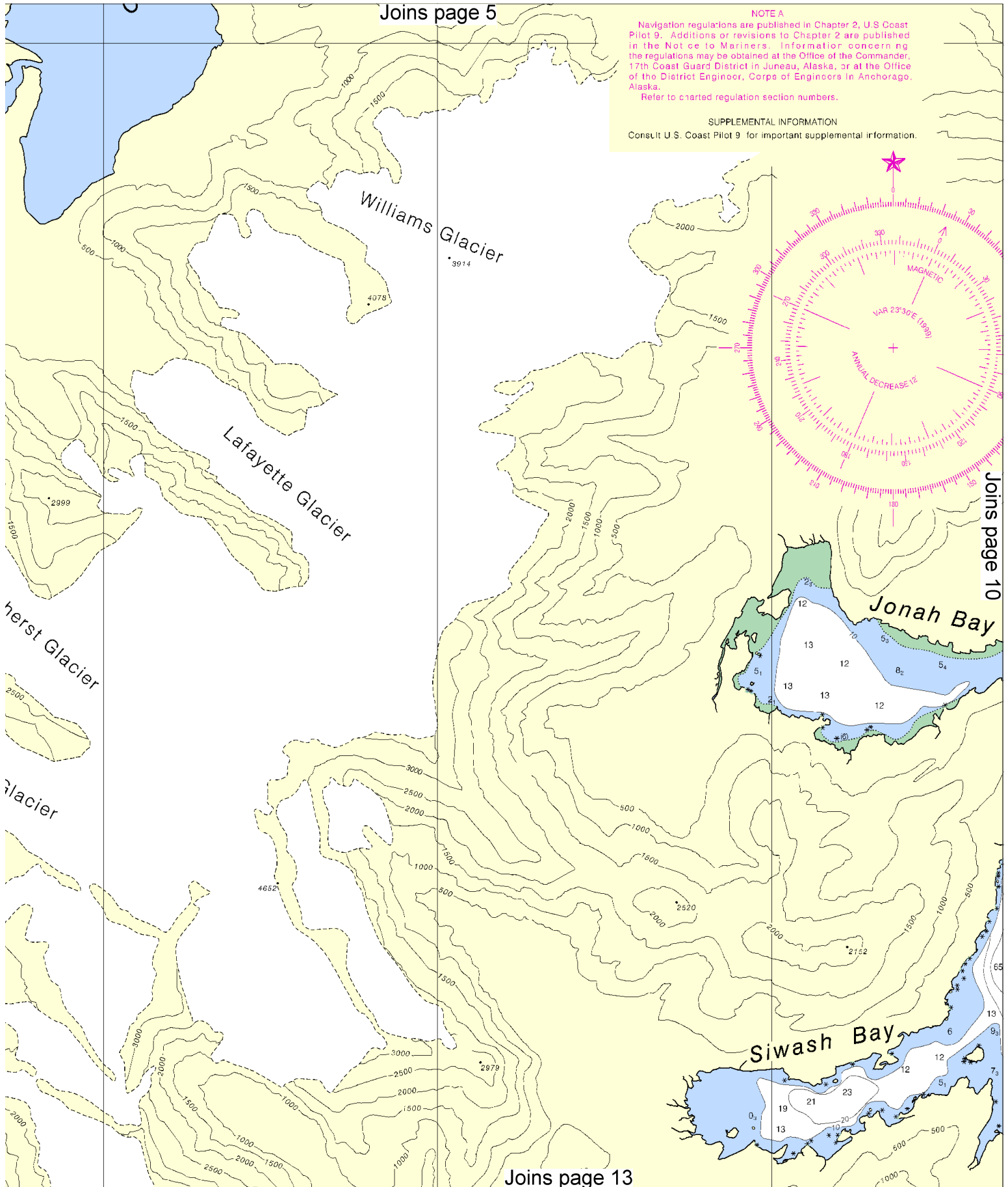
NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska, or at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.

Refer to charted regulation section numbers.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 9 for important supplemental information.



Joins page 6

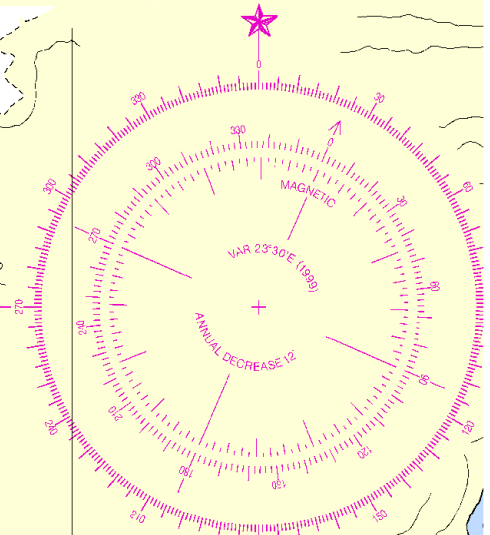
NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska, or at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.

Refer to charted regulation section numbers.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 9 for important supplemental information.



Joins page 9

e_r

Joins page 14

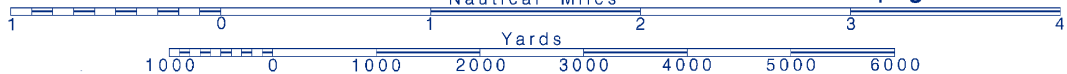
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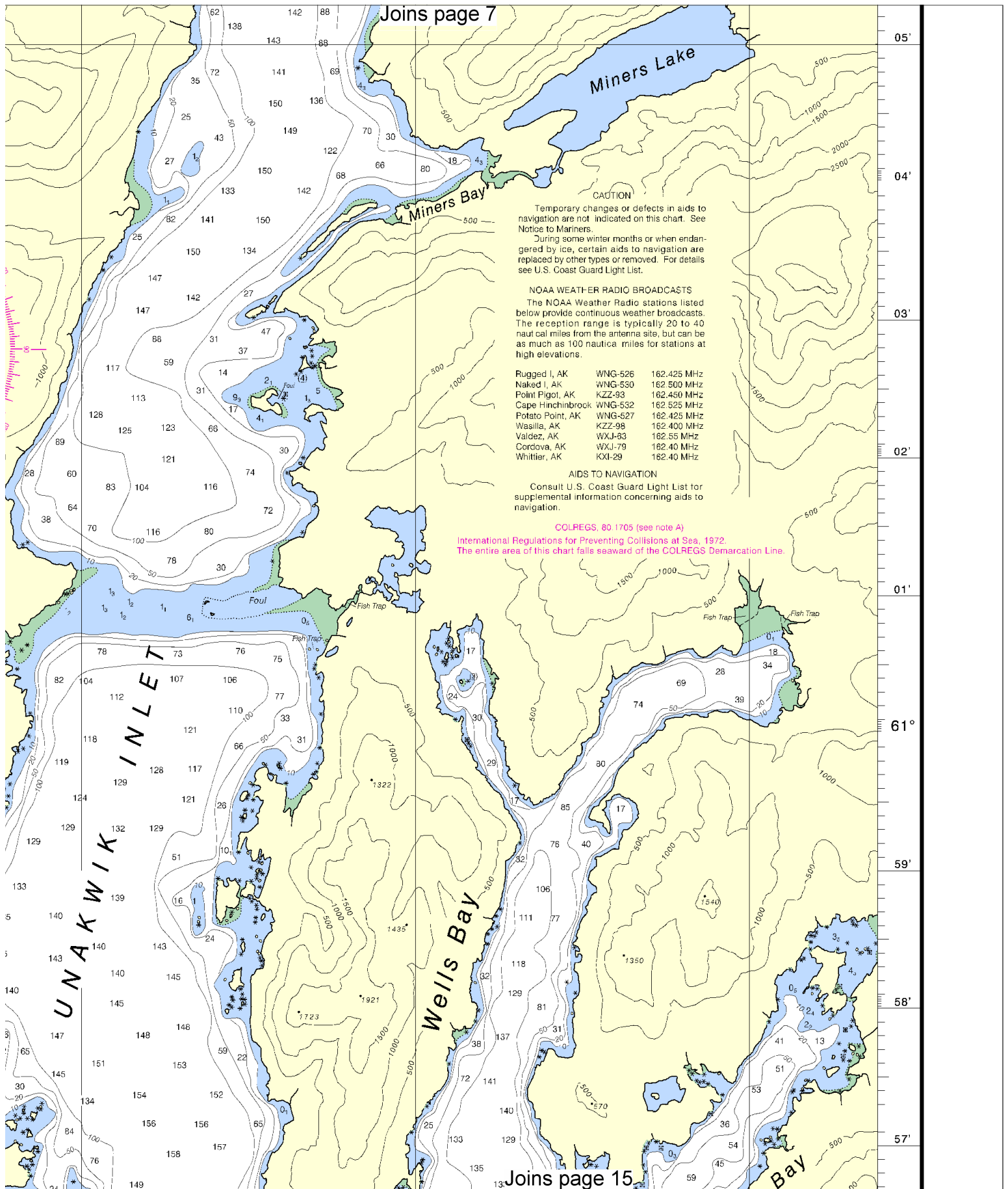


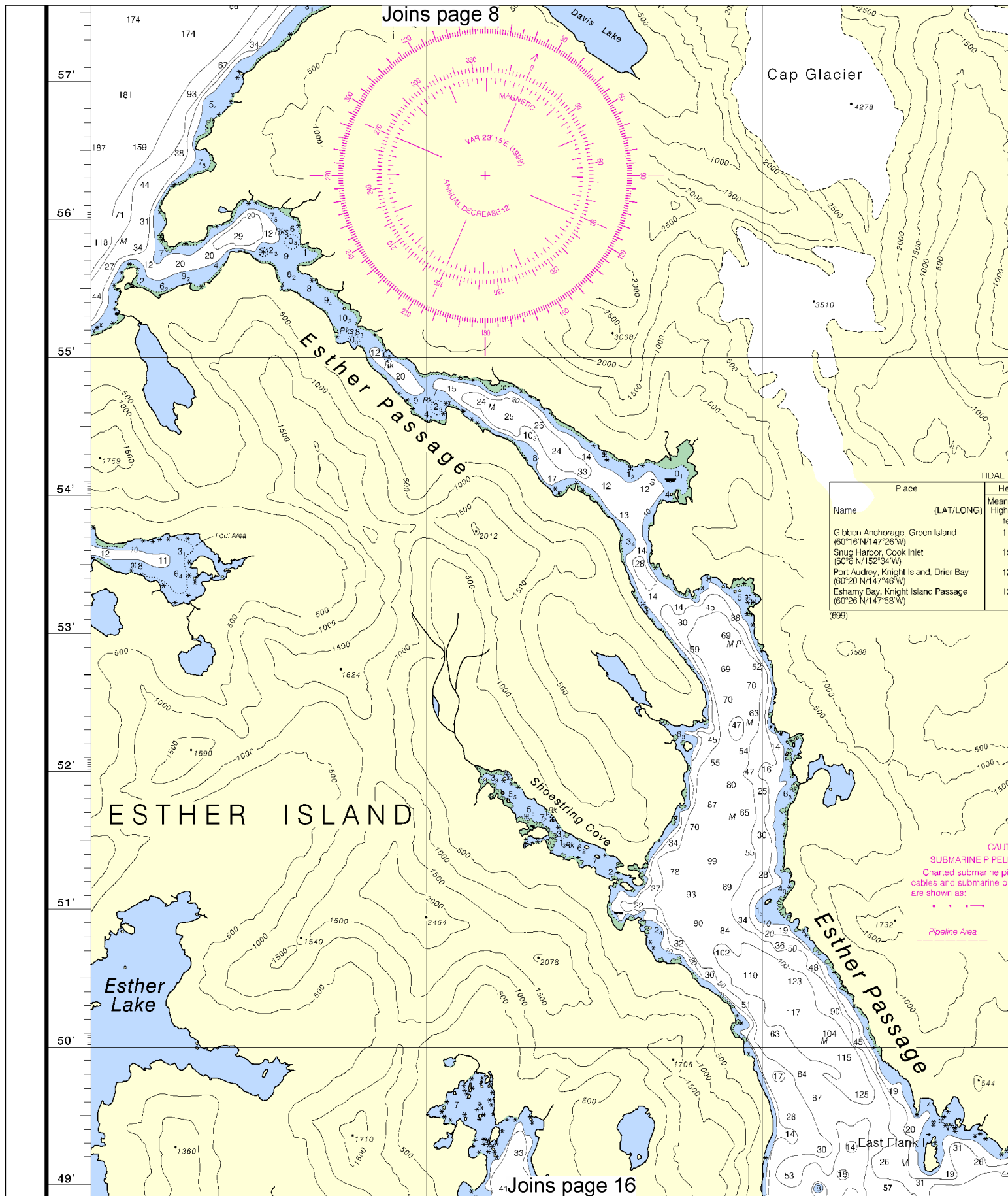
Printed at reduced scale.

SCALE 1:50,000
Nautical Miles

See Note on page 5.







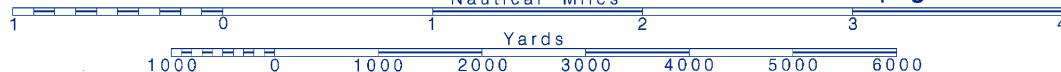
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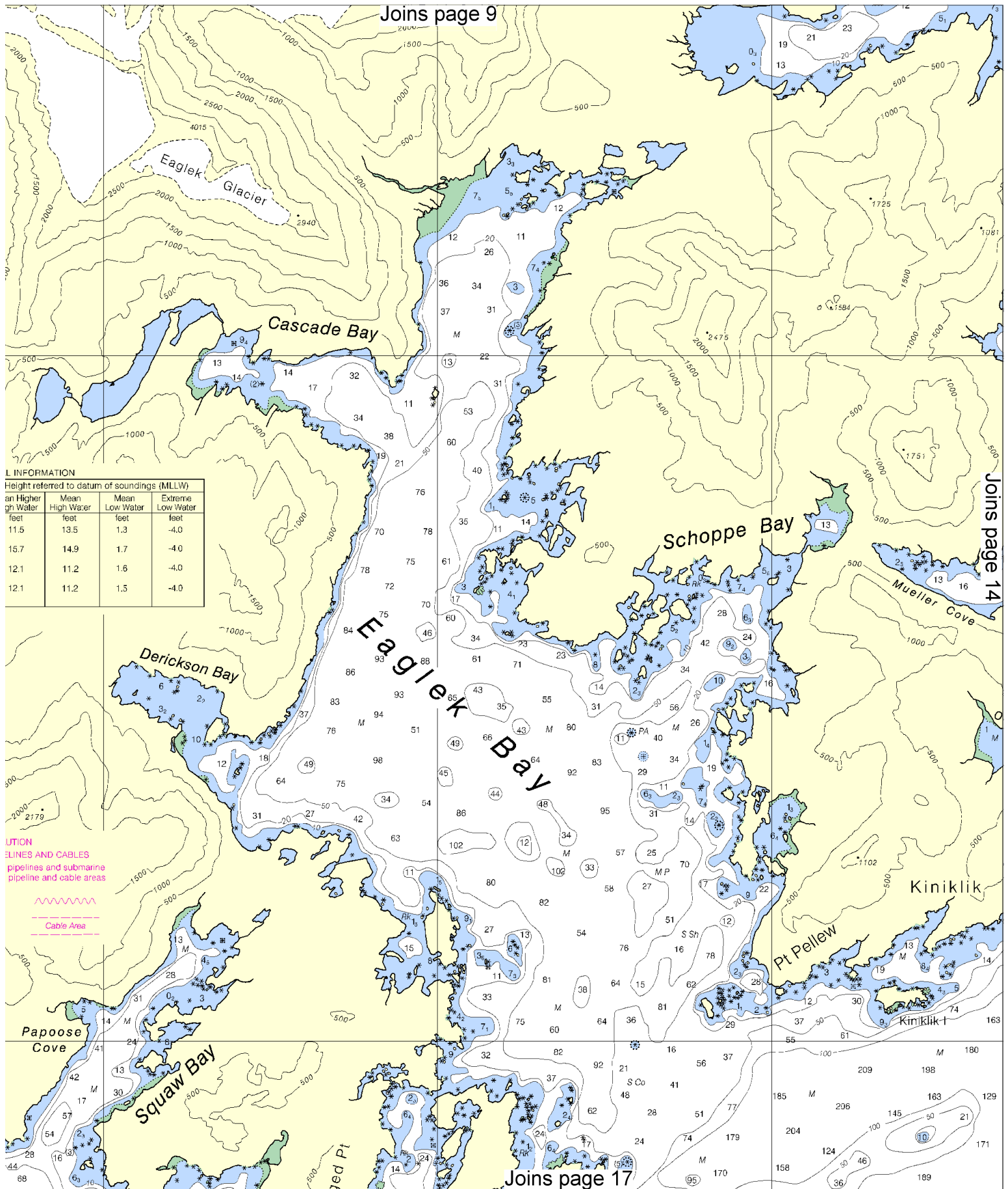


Printed at reduced scale.

SCALE 1:50,000

See Note on page 5.





LI INFORMATION

Height referred to datum of soundings (MLLW)

Mean High Water	Mean Low Water	Extreme Low Water
feet	feet	feet
11.5	13.5	1.3
15.7	14.9	1.7
12.1	11.2	1.6
12.1	11.2	1.5

UTION
ELINES AND CABLES
 pipelines and submarine
 pipeline and cable areas

~~~~~  
 Cable Area

Joins page 10

Information referred to datum of soundings (MLLW)

| Mean High Water | Mean Low Water | Extreme Low Water |
|-----------------|----------------|-------------------|
| feet            | feet           | feet              |
| 13.5            | 1.3            | -4.0              |
| 14.9            | 1.7            | -4.0              |
| 11.2            | 1.6            | -4.0              |
| 11.2            | 1.5            | -4.0              |

AND CABLES  
and submarine  
and cable areas

Cable Area

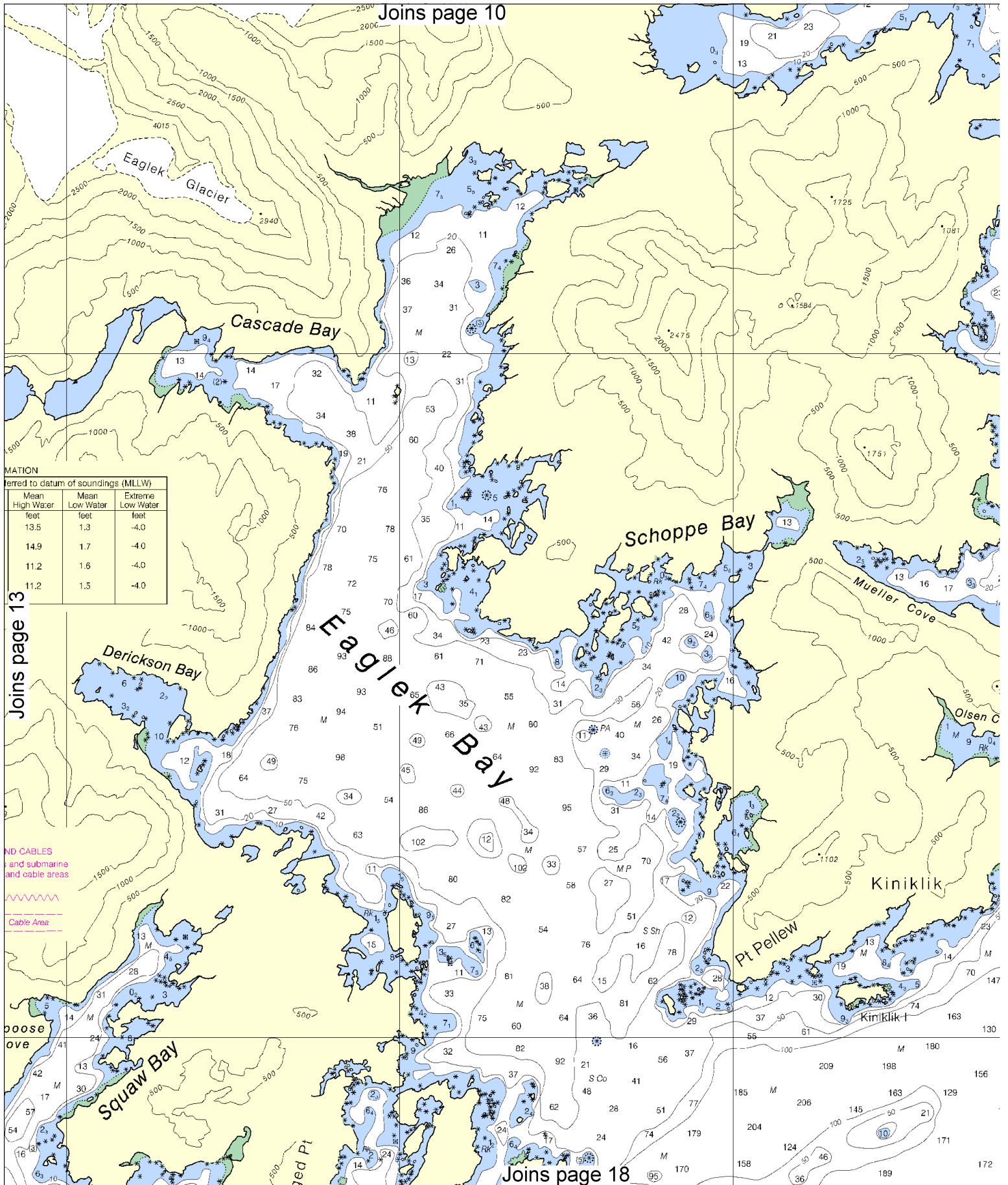
14



Printed at reduced scale.

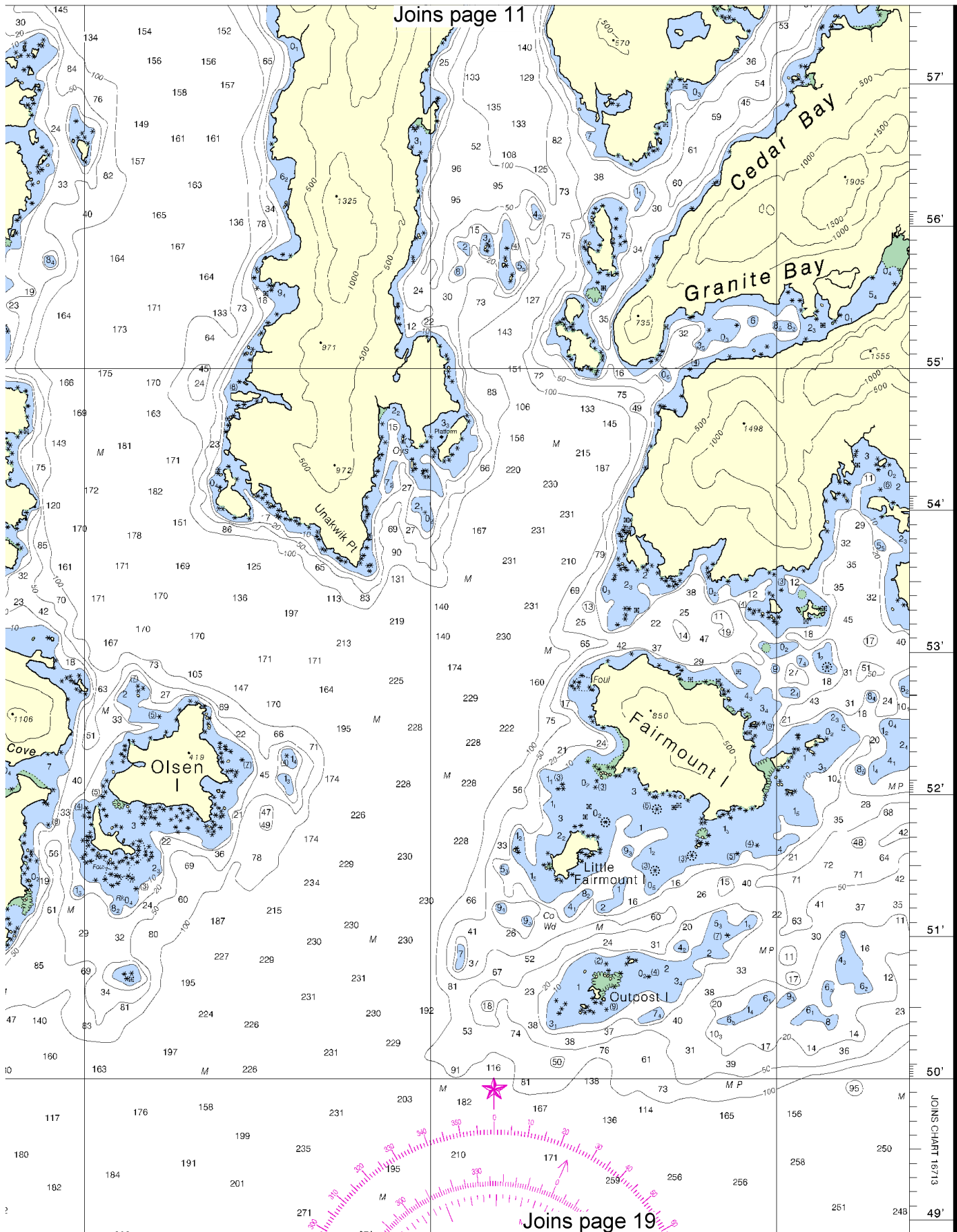
SCALE 1:50,000

See Note on page 5.



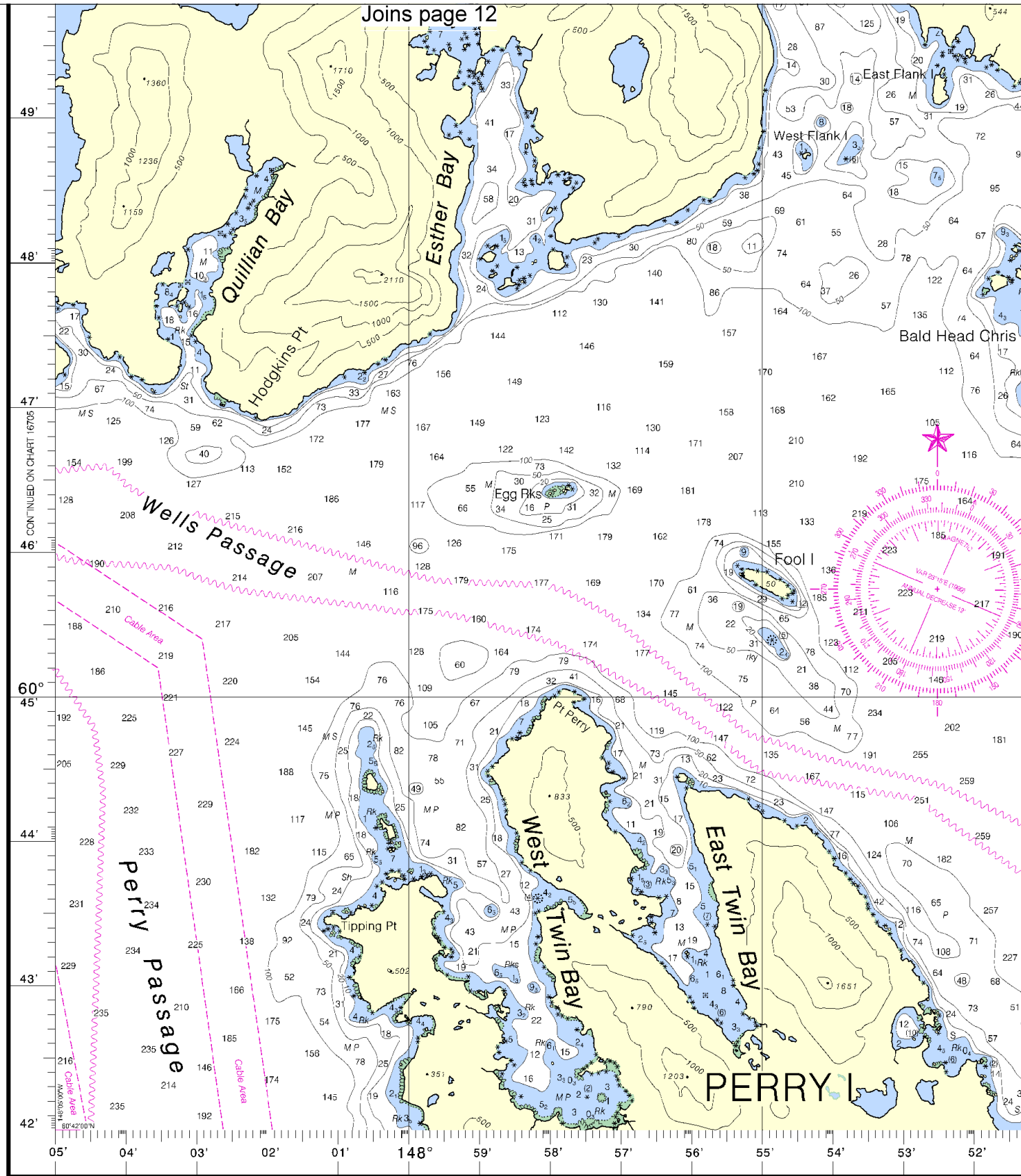


Joins page 11



Joins page 19

Joins page 12



1st Ed., Sept. 25/99 ■

16712

CAUTION

This chart has been corrected from the Notice to Mariners published weekly by the National Imagery and Mapping Agency and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district to the date shown in the lower left hand corner.

SOUNDINGS IN FATHOMS

(FATHOMS AND FEET TO 11 FATHOMS)

16

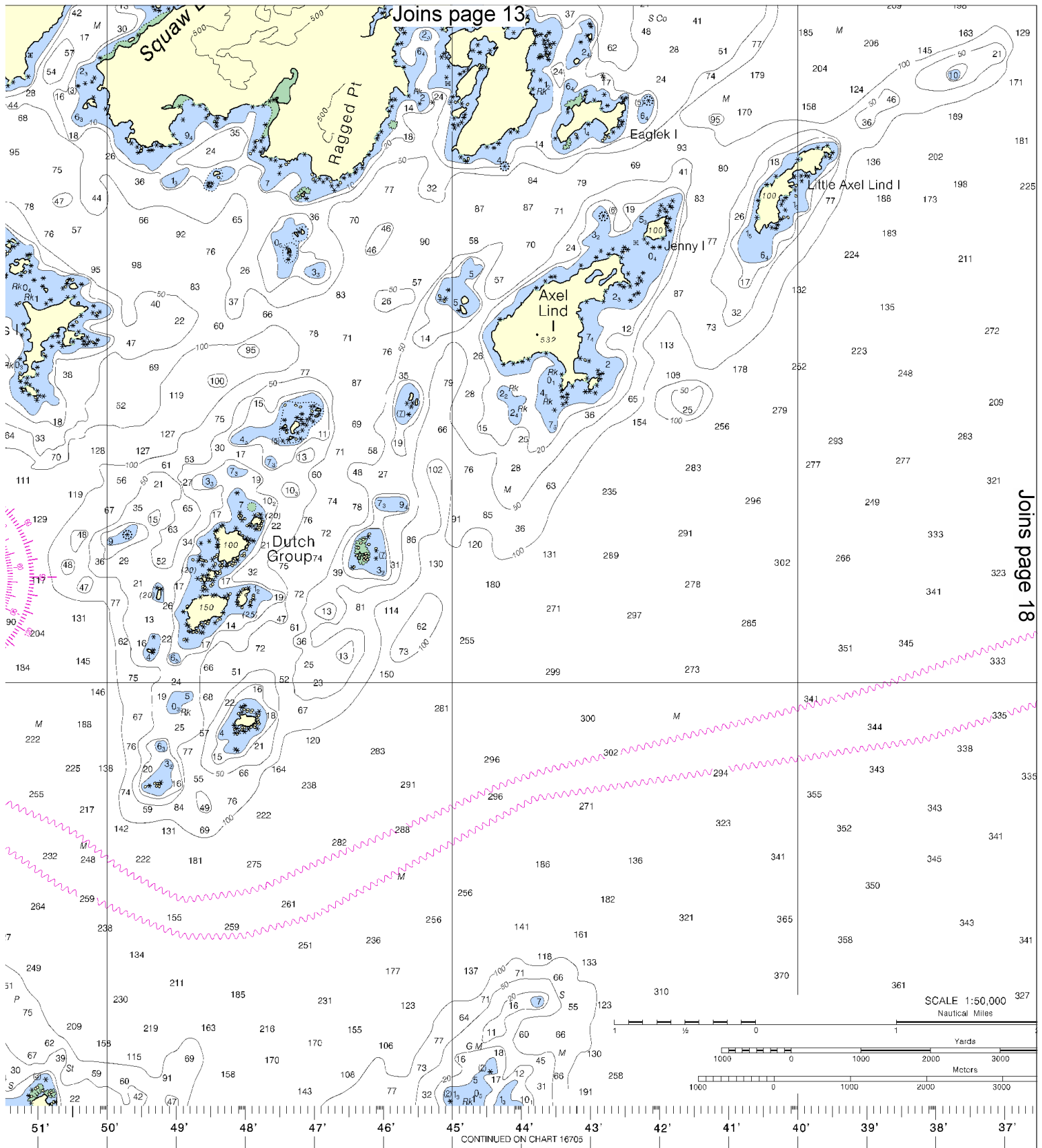


Printed at reduced scale.

SCALE 1:50,000  
Nautical Miles

See Note on page 5.

Yards  
1000 0 1000 2000 3000 4000 5000 6000

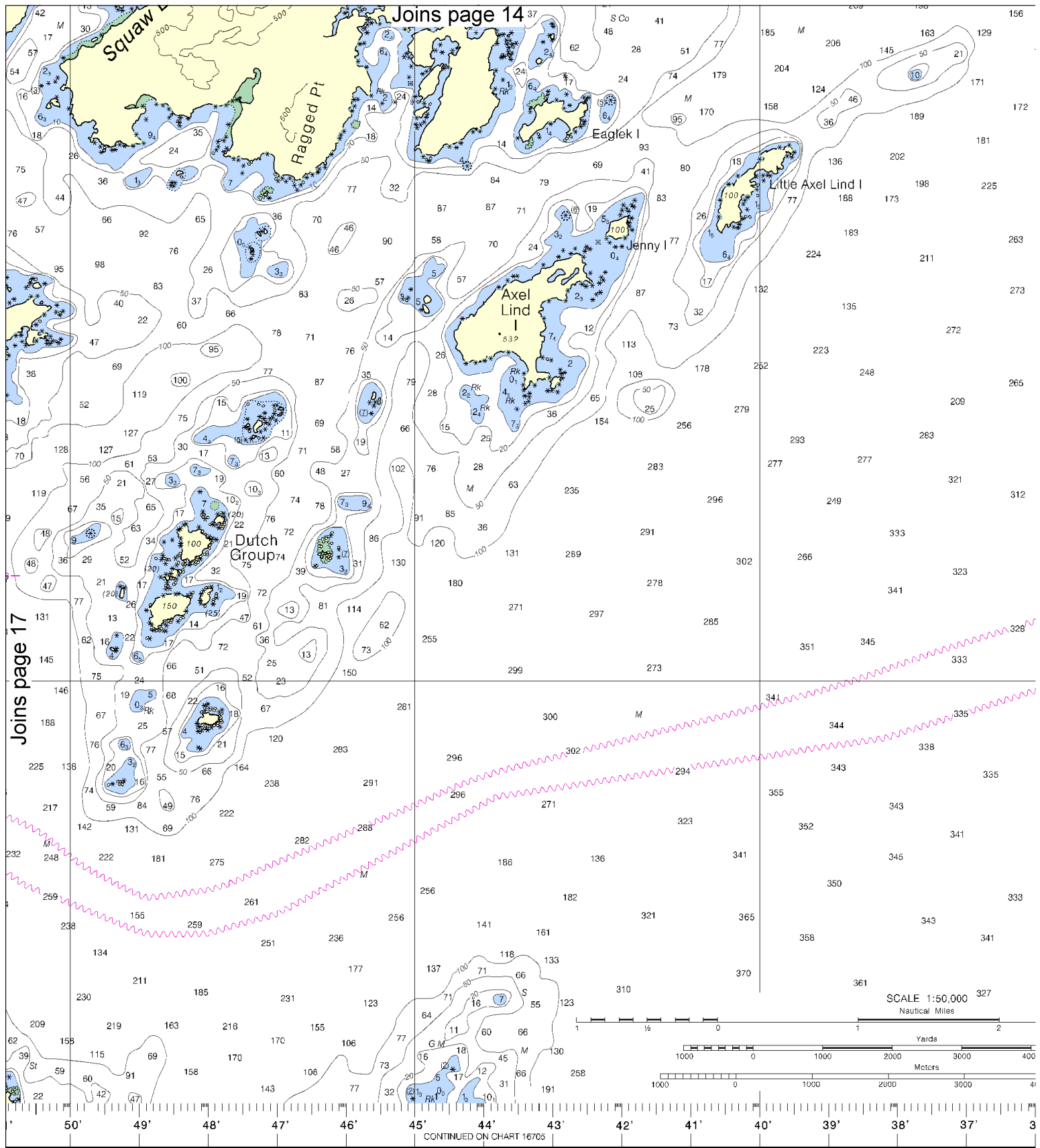


THOMS  
(THOMS)

Published at Washington, D.C.  
U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SERVICE  
COAST SURVEY

|         |   |    |    |    |    |    |    |    |    |    |    |    |
|---------|---|----|----|----|----|----|----|----|----|----|----|----|
| FATHOMS | 1 | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| FEET    | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 |
| METERS  | 1 | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |





18

18

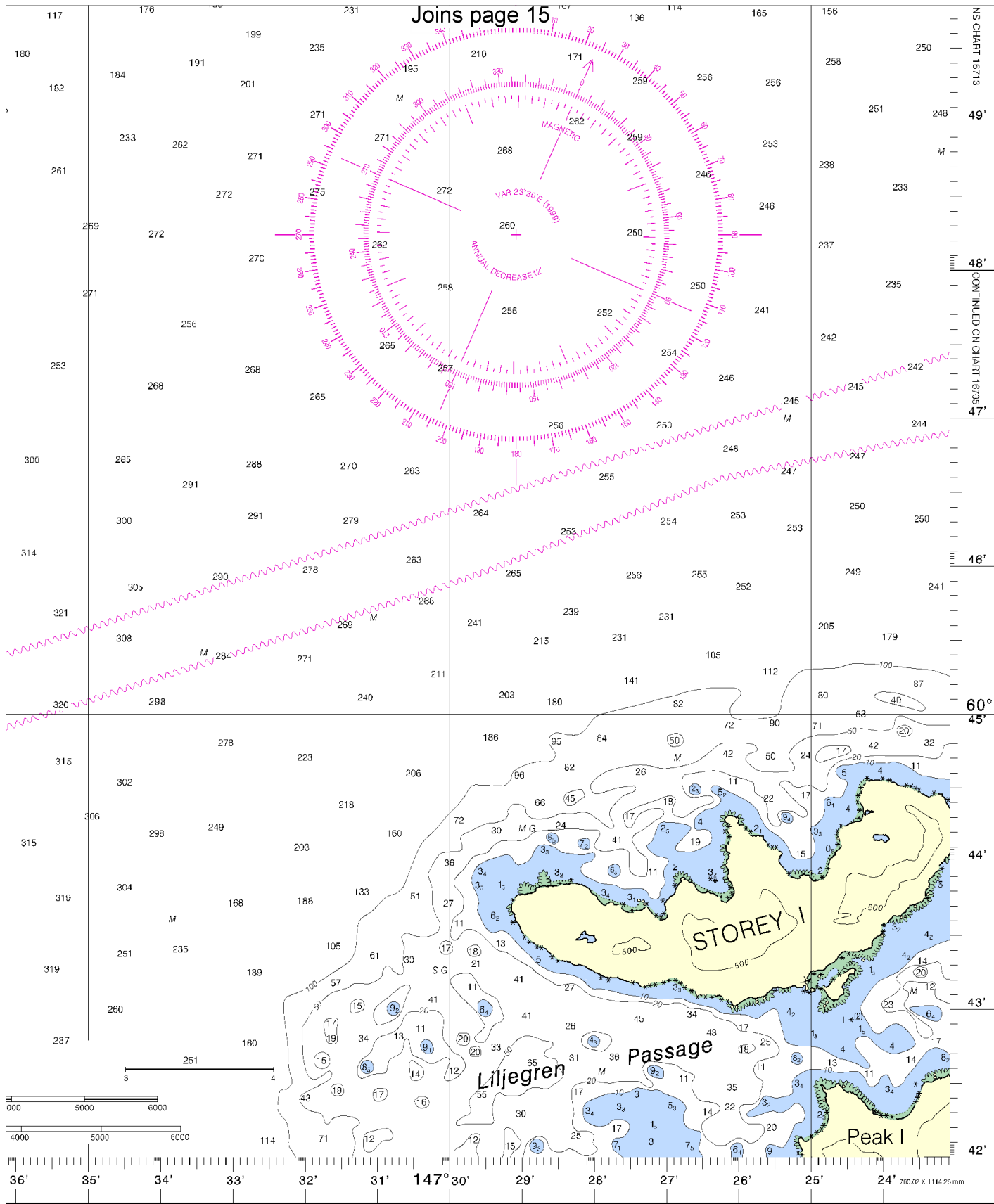


Printed at reduced scale.

SCALE 1:50,000

See Note on page 5.





NS CHART 16713  
49'  
48'  
47'  
46'  
60°  
45'  
44'  
43'  
42'

ED. NO. 1  
NSN 7642014563660  
NIMA STOCK NO. 16AC016712

16712

## EMERGENCY INFORMATION

### VHF Marine Radio channels for use on the waterways:

**Channel 6** – Inter-ship safety communications.

**Channel 9** – Communications between boats and ship-to-coast.

**Channel 13** – Navigation purposes at bridges, locks, and harbors.

**Channel 16 – Emergency, distress and safety calls** to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.

**Channel 22A** – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

**Channels 68, 69, 71, 72 & 78A** – Recreational boat channels.

### Distress Call Procedures

1. Make sure radio is on.
2. Select Channel 16.
3. Press/Hold the transmit button.
4. Clearly say: "MAYDAY, MAYDAY, MAYDAY."
5. Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
6. Release transmit button.
7. Wait for 10 seconds – If no response Repeat MAYDAY Call.

### **HAVE ALL PERSONS PUT ON LIFE JACKETS !!**

**Mobile Phones** – Call 911 for water rescue.

**Coast Guard Search & Rescue (Pacific Coord)** – 510-437-3700

**Coast Guard Search & Rescue (RCC Juneau)** – 907-463-2000

**NOAA Weather Radio** – 162.400 MHz, 162.425 MHz, 162.450 MHz, 162.475 MHz, 162.500 MHz, 162.525 MHz, 162.550 MHz.

**Getting and Giving Help** – Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.



## NOAA CHARTING PUBLICATIONS

**Official NOAA Nautical Charts** – NOAA surveys and charts the national and territorial waters of the U.S, including the Great Lakes. We produce over 1,000 traditional nautical charts covering 3.4 million square nautical miles. Carriage of official NOAA charts is mandatory on the commercial ships that carry our commerce. They are used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters. NOAA charts are available from official chart agents listed at: [www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov).

**Official Print-on-Demand Nautical Charts** – These full-scale NOAA charts are updated weekly by NOAA for all Notice to Mariner corrections. They have additional information added in the margin to supplement the chart. Print-on-Demand charts meet all federal chart carriage regulations for charts and updating. Produced under a public/private partnership between NOAA and OceanGrafix, LLC, suppliers of these premium charts are listed at [www.OceanGrafix.com](http://www.OceanGrafix.com).

**Official Electronic Navigational Charts (NOAA ENC<sup>®</sup>)** – ENCs are digital files of each chart's features and their attributes for use in computer-based navigation systems. ENCs comply with standards of the International Hydrographic Organization. ENCs and their updates are available for free from NOAA at [www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov).

**Official Raster Navigational Charts (NOAA RNC<sup>™</sup>)** – RNCs are geo-referenced digital pictures of NOAA's charts that are suitable for use in computer-based navigation systems. RNCs comply with standards of the International Hydrographic Organization. RNCs and their updates are available for free from NOAA at [www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov).

**Official BookletCharts<sup>™</sup>** – BookletCharts<sup>™</sup> are reduced scale NOAA charts organized in page-sized pieces. The "Home Edition" can be downloaded from NOAA for free and printed. The Internet address is [www.NauticalCharts.gov/bookletcharts](http://www.NauticalCharts.gov/bookletcharts).

**Official PocketCharts<sup>™</sup>** – PocketCharts<sup>™</sup> are for beginning recreational boaters to use for planning and locating, but not for real navigation. Measuring a convenient 13" by 19", they have a 1/3 scale chart on one side, and safety, boating, and educational information on the reverse. They can be purchased at retail outlets and on the Internet.

**Official U.S. Coast Pilot<sup>®</sup>** – The Coast Pilots are 9 text volumes containing information important to navigators such as channel descriptions, port facilities, anchorages, bridge and cable clearances, currents, prominent features, weather, dangers, and Federal Regulations. They supplement the charts and are available from NOAA chart agents or may be downloaded for free at [www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov).

**Official On-Line Chart Viewer** – All NOAA nautical charts are viewable here on-line using any Internet browser. Each chart is up-to-date with the most recent Notices to Mariners. Use these on-line charts as a ready reference or planning tool. The Internet address is [www.NauticalCharts.gov/viewer](http://www.NauticalCharts.gov/viewer).

**Official Nautical Chart Catalogs** – Large format, regional catalogs are available for free from official chart agents. Page size, state catalogs are posted on the Internet and can be printed at home for free. Go to <http://NauticalCharts.NOAA.gov/mcd/ccatalogs.htm>.

**Internet Sites:** [www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov), [www.NOAA.gov](http://www.NOAA.gov), [www.TidesandCurrents.NOAA.gov](http://www.TidesandCurrents.NOAA.gov), [www.NOS.NOAA.gov](http://www.NOS.NOAA.gov).